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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/766,526

01/29/2004

Albert Johannes Maria Jansen

081468-0308019

2235

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7590

03/13/2007

PILLSBURY WINTHROP SHAW PITTMAN, LLP

P.O. BOX 10500

MCLEAN, VA 22102

EXAMINER

FULLER, RODNEY EVAN

ART UNIT

PAPER NUMBER

2851

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

03/13/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/766,526	JANSEN ET AL.	
	Examiner	Art Unit	
	Rodney E. Fuller	2851	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☒ Claim(s) 1-10, 23 and 26-31 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Rodney Fuller
Primary Examiner

[Handwritten Signature]

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 1-10, 23 and 26-31 are objected to because of the following item(s):
 - a. Claim 1 includes the limitation "said mask being adapted to receive said mask at at least two positions."
 - b. Claims 5 and 6 include the limitation "...said mask table is adapted to accommodate the mask."
 - c. Claim 8 includes the limitation "...a fine positioning actuator adapted to make fine adjustments."
 - d. Claim 9 includes the limitation "...a long stroke drive unit adapted to scan."
 - e. Claim 26 includes the limitation "...is adapted to position the mask."
 - f. Claim 27 includes the limitation "... said mask table is adapted to receive."

It has been held that the recitation that an element is "adapted to" perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. In re Hutchison, 69 USPQ 138.

- g. Claims 2-10 and 23 depend from claim 1 and therefore include the deficiencies of claim 1.
 - h. Claims 27-31 depend from claim 26 and therefore include the deficiencies of claim 26.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-31 are rejected under 35 U.S.C. 102(e) as being anticipated by Fujimaki (US 2005/0151947).

Regarding claim 1, 11-13, 26 and 27, Fujimaki discloses "an illumination system (Fig. 1, ref.# 10) configured to provide a beam of radiation (Fig. 1, ref.# IL); a mask table (Fig. 1, ref.# RST) configured to hold a mask (Fig. 1, ref.# R), the mask configured to impart the beam with a pattern, said mask table being adapted to receive said mask at at least two positions displaced (paragraph 0006, lines 3-5) in a first direction so that different parts of the pattern on the mask can be brought within an exposure field (Fig. 1, ref.# IAR) when the mask is in different ones of said positions; a substrate table (Fig. 1, ref.# WST) configured to hold a substrate (Fig. 1, ref.# W); and a projection system (Fig. 1, ref.# PL) configured to project the patterned beam onto a target portion (Fig. 1, ref.# IA) of the substrate, wherein said exposure field (Fig. 1, ref.# IAR) of said projection system is smaller than said mask (Fig. 1, ref.# R) in at least the first direction."

Regarding claims 2, 14 and 28, Fujimaki discloses “a mask handling device (Fig. 1, ref.# RST) configured to place said mask on said mask table selectively in different ones of said positions (paragraph 0036, lines 6-9).”

Regarding claims 3, 15 and 29, Fujimaki discloses “wherein the distance between the center of said mask when in the first position and the center of said mask when in the second position is substantially equal to the length of said exposure field in said first direction.” (paragraph 0071, lines 1-4 – The mask is movable such that the total surface of the reticle can slide past the optical axis of the projection system. Thus, there are two positions wherein the distance between is substantially equal to the length of the exposure field in the scan direction.)

Regarding claims 4, 16 and 30, Fujimaki discloses “wherein said distance is slightly less than said length to provide an overlap of the exposures necessary to image the whole pattern.” (paragraph 0071, lines 1-4 – The mask is movable such that the total surface of the reticle can slide past the optical axis of the projection system. Thus, there are two positions wherein the distance is slightly less than the length.)

Regarding claims 5, 17 and 31, Fujimaki discloses “wherein said mask table is adapted to accommodate the mask in N positions to allow imaging of a pattern up to N times the length of the exposure field in the first direction, where N is in the range of from 2 to 5.” (paragraph 0071, lines 1-4 – The mask is movable such that the total surface of the reticle can slide past the optical axis of the projection system.)

Regarding claims 6 and 18, Fujimaki discloses “wherein said mask table is adapted to accommodate the mask at a large number or continuum of positions in the

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first direction.” (paragraph 0071, lines 1-4 – The mask is movable such that the total surface of the reticle can slide past the optical axis of the projection system.)

Regarding claims 7, 10, 19 and 22, Fujimaki discloses “wherein said mask table comprises a mask clamp to clamp the mask along its edges parallel to the first direction.” (paragraph 0123, lines 1-3)

Regarding claims 8 and 20, Fujimaki discloses “a fine positioning actuator adapted to make fine adjustments of the position of the mask table in at least said first direction.” (paragraph 0070, lines 4-5)

Regarding claims 9 and 21, Fujimaki discloses “a long stroke drive unit adapted to scan said mask table during an exposure in a second direction that is substantially perpendicular to said first direction.” (paragraph 0070, lines 1-4)

Regarding claims 23-26, Fujimaki discloses “wherein the apparatus is configured to at least partly fill a space between said projection system and the substrate with a liquid.” (paragraph 0155, lines 21-24)

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Suwa (US 6,191,429), Lin (US 2005/0012914), Yuan, et al. (US 2004/0046947), McCullough, et al. (US 6,967,713), Nishi (US 6,590,636), Dunn, et al. (US 5,897,986) and Jain (US 5,721,606) each disclose an illumination system configured to provide a beam of radiation; a mask table configured to hold a mask, the mask configured to impart the beam with a pattern, said mask table being adapted to receive said mask at at least two positions displaced in a first direction so that different parts of the pattern on the mask can be brought within an exposure field when the mask is in different ones of said positions; a substrate table configured to hold a substrate; and a projection system configured to project the patterned beam onto a target portion of the substrate, wherein said exposure field of said projection system is smaller than said mask in at least the first direction.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rodney E. Fuller whose telephone number is 571-272-2118. The examiner can normally be reached on 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diane Lee can be reached on 571-272-2399. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Rodney E Fuller
Primary Examiner
Art Unit 2851

March 6, 2007

A handwritten signature in black ink, appearing to read 'Ry' followed by a stylized flourish.